

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-009888**Date Inspected:** 13-Oct-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** See Below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG & Tower Fabrication**Summary of Items Observed:**

CWI Inspectors: Mr. Sun Bo, Mr. Li Yang, Mr. Li Zhi Jiang

On this date CALTRANS OSM Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. This QA Inspector observed the following:

OBG BAY 2

This QA Inspector observed ZPMC welder Mr. Li Guo Ping, stencil 045251 is using shielded metal arc process WPS-B-T-2112 to make OBG floor beam fillet tack weld FB3039-001-120. This QA Inspector observed a welding current of approximately 160 amps, the base material is clean where the tack welds were being made and Mr. Li Guo Ping is certified to make this weld. This QA Inspector observed the shielded metal arc welding electrodes are being stored in an electrically heated electrode storage container which is warm to the touch and it appears to be connected to the welding power supply cable. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 5

This QA Inspector observed ZPMC welder Mr. Si Gao Feng, stencil 204342, is using welding procedure WPS-B-T-2231-TC-U4C-F to make cantilever beam groove weld BK001-038-004. This QA Inspector observed a

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welding current of approximately 300 amps 30.0 volts and Mr. Si Gao Feng is certified to make this weld. ZPMC QC Inspector Mr. Wang Liang had previously recorded a welding current of 311 amps and 30.7 volts. Items observed on this date appeared to generally comply with applicable contract documents.

This QA Inspector observed ZPMC welder Mr. Liu Ji, stencil 070007, is using shielded metal arc welding process to make repairs to flame cut notches on various traveler rail plates. This QA Inspector observed a welding current of approximately 110 amps. This QA Inspector observed Mr. Liu Ji is certified to make this weld. Items observed on this date appeared to generally comply with applicable contract documents.

OBG Bay 9

This QA Inspector observed ZPMC welder Mr. Xiao Bianbin stencil 059440 is using gas metal arc welding procedure WPS-B-T-2342-U5(U-rib) to tack weld OBG closed ribs to deck plate DP3007-001. Prior to this QA Inspector gaining access to the welding machine, ZPMC welder Mr. Xiao Bianbin observed this QA Inspector approaching where the welding was taking place and Mr. Bainbin appeared to adjust the weld machine settings. ZPMC QC inspector Mr. Chen Shigang also measured the welding machine parameters and adjusted the welding machine as this QA Inspector was preparing to obtain welding current and voltage measurements of the machine that is being used by Mr. Bianbin. This QA Inspector measured a welding current of approximately 340 amps and 25.0 volts. Items observed by this QA Inspector appear to be progressing in compliance with project specifications.

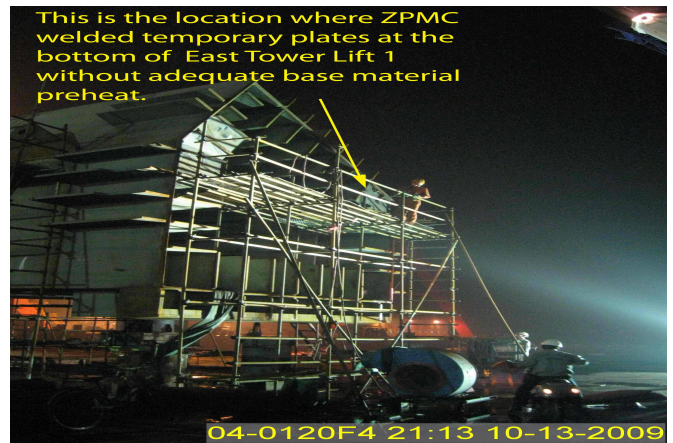
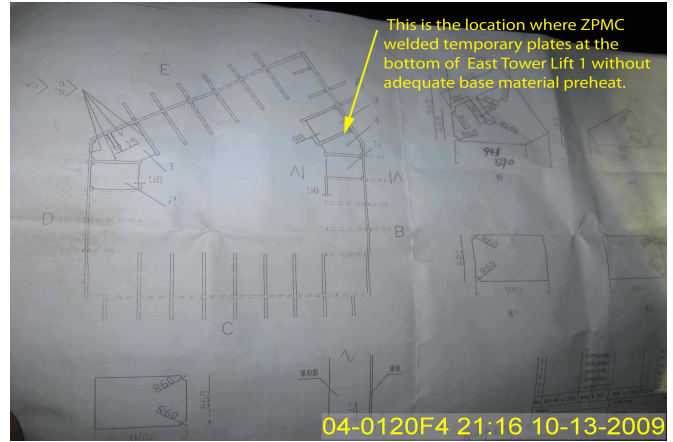
Tower Boat Dock

An Incident report was issued to document the following:

This QA Inspector observed ZPMC personnel performing shielded metal arc welding of temporary reinforcement plates to 65 mm thick skin stiffener plates on East Tower Lift 1 without obtaining adequate base material preheat. This QA Inspector used a 100 degree Celsius tempstik and determined the base material adjacent to all four sides of the weld appear to be less than 100 degrees Celsius and Welding Procedure WPS-B-T-2112 requires this thickness of material to have a minimum of 110 degrees Celsius. At around 2115 hours this QA Inspector requested QC representative Mr. Fu Wei Min, who is not a CWI, to have the ZPMC Certified Welding Inspector (CWI) that is responsible for this welding to come to the location of the welding to discuss this preheat issue. Approximately 20 minutes later Mr. Fu Wei Min informed this QA Inspector that the CWI had left the jobsite and there are no other CWI Inspectors available to monitor this welding. Note: Special Provisions, Section 8-3.01 states: "QC Inspections shall be provided to ensure continuous inspection when any welding is being performed. Continuous inspection, as a minimum, shall include (1) having QC Inspectors continually present on the shop floor or project site when any welding operation is being performed, and (2) having a QC Inspector within such close proximity of all welders or operators so that inspections by the QC Inspector of each operation, at each welding location, shall not lapse for a period exceeding 30 minutes." See the photographs below for additional information.

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Summary of Conversations:

See Above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang phone: 150-0042-2372 , who represents the Office of Structural Materials for your project.

Inspected By:	Dawson,Paul
Reviewed By:	Carreon,Albert

Quality Assurance Inspector
QA Reviewer
